

21 ~~55~~ (New) A method of manufacturing a semiconductor device comprising the steps of:

forming a semiconductor film comprising silicon over a substrate;  
providing said semiconductor film with a catalytic element for facilitating a crystallization of said semiconductor film;  
irradiating said semiconductor film with laser light in air for crystallizing said semiconductor film after providing said catalytic element;  
removing a natural oxidation film from a surface of said semiconductor film by etching;  
and  
leveling said surface of said semiconductor film by heating after removing said natural oxidation film.

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56 (New) A method of manufacturing a semiconductor device comprising the steps of:  
forming a semiconductor film comprising silicon over a substrate;  
providing said semiconductor film with a catalytic element for facilitating a crystallization of said semiconductor film;  
irradiating said semiconductor film with laser light in air for crystallizing said semiconductor film after providing said catalytic element;  
removing a natural oxidation film from a surface of said semiconductor film by etching;  
and  
leveling said surface of said semiconductor film by heating in an atmosphere after removing said natural oxidation film, a concentration of oxygen or a oxygen compound contained in said atmosphere is 10 ppm or less.

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57 (New) A method of manufacturing a semiconductor device according to any one of claims ~~55~~ and ~~56~~, wherein said step of leveling said surface of said semiconductor film is conducted by furnace annealing.